

**USGS-NPS Vegetation Mapping Program**  
**Sunset Crater Volcano National Monument**

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*Pinus ponderosa* / *Fallugia paradoxa* Woodland

COMMON NAME	Ponderosa Pine / Apache Plume Woodland
SYNONYM	N/A
PHYSIOGNOMIC CLASS	Woodland (II.)
PHYSIOGNOMIC SUBCLASS	Evergreen woodland (II.A.)
PHYSIOGNOMIC GROUP	Temperate or subpolar needle-leaved evergreen woodland (II.A.4.)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (II.A.4.N.)
FORMATION	Rounded-crowned temperate or subpolar needle-leaved evergreen woodland (II.A.4.N.a.)
ALLIANCE	<i>Pinus ponderosa</i> Woodland Alliance

CLASSIFICATION CONFIDENCE LEVEL Low Confidence, Newly described at Sunset Crater Volcano NM. No additional global description data available.

USFS WETLAND SYSTEM Upland

RANGE

**Sunset Crater Volcano National Monument**

Ponderosa Pine / Apache Plume Woodland is one of the most common associations in Sunset Crater Volcano NM and also occurs frequently in the park environs. This association is found on level cinder areas and steeper cinder slopes in the eastern section of the park. It is also the most common association in the eastern half of the park environs.

ENVIRONMENTAL DESCRIPTION

**Sunset Crater Volcano National Monument**

Ponderosa Pine / Apache Plume Woodland was found on cinder gravel with a range of slopes (0-45%, average 11%). Elevation ranged from 1,975-2,450m (average 2,120m).

MOST ABUNDANT SPECIES

**Sunset Crater Volcano National Monument**

<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Pinus ponderosa</i>
Shrub	<i>Fallugia paradoxa</i>

ASSOCIATED SPECIES

**Sunset Crater Volcano National Monument**

*Alhagi maurorum*, *Andropogon hallii*, *Bouteloua gracilis*, *Bromus tectorum*, *Eriogonum corymbosum*, *Ericameria nauseosa*, *Forestiera pubescens*, *Linum lewisii*, *Juniperus osteosperma*, *Pinus edulis*, *Pseudotsuga menziesii*, *Ribes cereum*

VEGETATION DESCRIPTION

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Ponderosa Pine / Apache Plume Woodland total vegetation cover ranged from 9-55% cover (average 24%). The tree layer ranged in absolute cover from 9-55% (average 24%), shrub layer ranged from 1-43% (average 6%), and herbaceous layer ranged from 1-20% (average 4%). The average total number of species per relevé ranged from 2-25 (average 11) as seen in 27 relevés.

*Fallugia paradoxa* dominated the shrub layer (1-45% absolute cover, average 9%). The tree layer is dominated by *Pinus ponderosa* (5-36% absolute cover, average 16%) with DBH ranging from 11-85cm (average 34cm). The herbaceous layer was sparse.

CONSERVATION RANK G?

DATABASE CODE C EGL002999

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**MAP CLASSES**

Ponderosa Pine / Apache Plume Woodland is mapped as Ponderosa Pine / Apache Plume Woodland, Ponderosa Pine / Apache Plume Woodland (Sparse), and Ponderosa Pine / Apache Plume Woodland (Pinyon), represented respectively by map codes 17, 18, and 19.

The map class Ponderosa Pine / Apache Plume Woodland (Sparse) refers to relevés with less than 20% total vegetation cover and the map class Ponderosa Pine / Apache Plume Woodland (Pinyon) contains greater than 10% *Pinus edulis*.

Ponderosa Pine / Apache Plume Woodland and its modifiers are mapped as the predominant association in the eastern half of the project area. The total hectares mapped of Ponderosa Pine / Apache Plume Woodland in Sunset Crater Volcano NM is 354 and these occur within 70 polygons and in the park environs 1940 hectares within 187 polygons. This consists of map code 18 with 238 hectares and 18 polygons in Sunset Crater Volcano NM and 1650 hectares and 41 polygons in the park environs, map code 17 with 115 hectares and 51 polygons in Sunset Crater Volcano NM and 224 hectares and 127 polygons in the park environs, and map code 19 with 1 hectare and 1 polygon in Sunset Crater Volcano NM and 66 hectares and 19 polygons in the park environs.

**COMMENTS**

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Depending on the spacing of trees, this map class may represent a mosaic of Ponderosa Pine / Apache Plume Woodland and Apache Plume (Four Wing Saltbush, Torrey's Joint Fir) Cinder Shrubland with Apache Plume (Four Wing Saltbush, Torrey's Joint Fir) Cinder Shrubland occurring in patches of 1,000m<sup>2</sup> or larger.